

MEOTHOD AND DEVICE FOR DISPLAYING IMAGE USING SPATIAL OPTICAL MODULATION ELEMENT

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Abstract

PURPOSE: To provide a method and a device for displaying an image displaying the bright and high quality image with a wide dynamic range and with an excellent gradation display characteristic even in the case of a dark image by using a spatial optical modulation element.

CONSTITUTION: A peak level V_p is detected at every fixed period of a video signal V_{in} supplied from the outside. A gain $G_s = V_p/V_o$ is calculated from the detected peak level V_p . However, a reference peak level V_o is defined as the standard peak level of the supplied video signal. After the gain G_s is calculated, the video signal level is modulated as $V_c = V_{in}/G_s$. The modulated video signal V_c is converted to a drive signal, and the spatial optical modulation element is driven by it. Simultaneously, a light output level L_{out} in a light emission part is made $L_{out} = G_s \times L_o$ by using the gain G_s . Where, L_o is a reference light output level in the light emission part. By repeating mentioned processing at every fixed period, the bright image with an excellent gradation characteristic and a black display characteristic than usual is displayed.

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===== WPI =====

TI - Image display device using spatial optical modulator elements - detects peak value of video signal for fixed period and controls drive to optical modulator accordingly

AB - J06102484 The device has a luminescence part which can change an optical output level. An optical modulator modulates the output light of the luminescence part. A video signal processing part processes the video signal and actuates a drive part which drives the optical modulator part.

- For every fixed period of video signal, the peak level V_p is detected. From this, the gain is computed as V_p/V_o where V_o is the standard peak level of the video signal supplied. From this, a video signal level is modulated and used to drive the optical modulator part.

- ADVANTAGE - Reduces display irregularity while displaying a dark image. Thus, a bright image display device of high image quality can be obtained.

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PA - (MATU) MATSUSHITA DENKI SANGYO KK

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===== PAJ =====

TI - METHOD AND DEVICE FOR DISPLAYING IMAGE USING SPATIAL OPTICAL MODULATION ELEMENT

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